

<110> Alberta Research Council Inc.

<120> TRANSGENIC PLANTS WITH REDUCED LEVEL OF SATURATED FATTY ACID AND METHODS FOR MAKING THEM

<130> 51043-3

<150> CA 2,450,000

<151> 2003-12-18

<160> 11

<170> PatentIn version 3.3

<210> 1

<211> 837

<212> DNA

<213> Anacystis nidulans

<400> 1

```

atgacccttg ctatccgacc caagcttgcc ttcaactggc cgaccgccct gttcatggtc      60
gccattcaca ttggagcact gttagcgttc ctgccggcca actttaactg gcccgctgtg      120
ggcgtgatgg ttgcgctgta ttacattacc gggtgttttg gcatcaccct aggctggcac      180
cggctaattt cgcaccgtag ctttgaagtt cccaaatggc tggaatacgt gctgggtgttc      240
tgtggcacct tggccatgca gcacggcccg atcgaatgga tcggtctgca ccgccaccat      300
cacctccact ctgaccaaga tgtcgatcac cacgactcca acaagggttt cctctggagt      360
cacttcctgt ggatgatcta cgaaattccg gcccgtagcg aagtagacaa gttcacgcgc      420
gatatcgctg gcgaccctgt ctatcgcttc tttaacaaat atttcttcgg tgtccaagtc      480
ctactggggg tacttttgta cgcctggggc gaggcttggg ttggcaatgg ctggtctttc      540
gtcgtttggg ggatcttcgc ccgcttggtg gtggtctacc acgtcacttg gctgggtgaac      600
agtgctaccc acaagtttgg ctaccgctcc catgagtctg gcgaccagtc caccaactgc      660
tggtgggttg cccttctggc ctttggtgaa ggctggcaca acaaccacca cgcctaccag      720
tactcggcac gtcatggcct gcagtgggtg gaatttgact tgacttggtt gatcatctgc      780
ggcctgaaga aggtgggtct ggctcgcaag atcaaagtgg cgtctccaaa caactaa      837

```

<210> 2

<211> 278

<212> PRT

<213> Anacystis nidulans

<400> 2

```

Met Thr Leu Ala Ile Arg Pro Lys Leu Ala Phe Asn Trp Pro Thr Ala
1           5           10           15

```

Leu Phe Met Val Ala Ile His Ile Gly Ala Leu Leu Ala Phe Leu Pro
 20 25 30
 Ala Asn Phe Asn Trp Pro Ala Val Gly Val Met Val Ala Leu Tyr Tyr
 35 40 45
 Ile Thr Gly Cys Phe Gly Ile Thr Leu Gly Trp His Arg Leu Ile Ser
 50 55 60
 His Arg Ser Phe Glu Val Pro Lys Trp Leu Glu Tyr Val Leu Val Phe
 65 70 75 80
 Cys Gly Thr Leu Ala Met Gln His Gly Pro Ile Glu Trp Ile Gly Leu
 85 90 95
 His Arg His His His Leu His Ser Asp Gln Asp Val Asp His His Asp
 100 105 110
 Ser Asn Lys Gly Phe Leu Trp Ser His Phe Leu Trp Met Ile Tyr Glu
 115 120 125
 Ile Pro Ala Arg Thr Glu Val Asp Lys Phe Thr Arg Asp Ile Ala Gly
 130 135 140
 Asp Pro Val Tyr Arg Phe Phe Asn Lys Tyr Phe Phe Gly Val Gln Val
 145 150 155 160
 Leu Leu Gly Val Leu Leu Tyr Ala Trp Gly Glu Ala Trp Val Gly Asn
 165 170 175
 Gly Trp Ser Phe Val Val Trp Gly Ile Phe Ala Arg Leu Val Val Val
 180 185 190
 Tyr His Val Thr Trp Leu Val Asn Ser Ala Thr His Lys Phe Gly Tyr
 195 200 205
 Arg Ser His Glu Ser Gly Asp Gln Ser Thr Asn Cys Trp Trp Val Ala
 210 215 220
 Leu Leu Ala Phe Gly Glu Gly Trp His Asn Asn His His Ala Tyr Gln
 225 230 235 240
 Tyr Ser Ala Arg His Gly Leu Gln Trp Trp Glu Phe Asp Leu Thr Trp
 245 250 255
 Leu Ile Ile Cys Gly Leu Lys Lys Val Gly Leu Ala Arg Lys Ile Lys
 260 265 270
 Val Ala Ser Pro Asn Asn
 275

<210> 3

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<220>
<221> SITE
<222> (3) .. (3)
<223> Xaa is any amino acid

<220>
<221> SITE
<222> (4) .. (4)
<223> Xaa is any amino acid

<400> 3
Lys Lys Xaa Xaa
1

<210> 4
<211> 4
<212> PRT
<213> artificial

<220>
<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 4
Lys Asp Glu Leu
1

<210> 5
<211> 4
<212> PRT
<213> artificial

<220>
<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 5
Lys Lys Ser Ser
1

<210> 6
<211> 4
<212> PRT
<213> artificial

<220>
<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 6
His Asp Glu Phe
1

<210> 7
<211> 4
<212> PRT
<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 7

Lys Glu Glu Leu

1

<210> 8

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 8

Lys Asp Gln Leu

1

<210> 9

<211> 35

<212> DNA

<213> artificial

<220>

<223> primer

<400> 9

ccccctcga gatgaccctt gctatccgac ccaag

35

<210> 10

<211> 36

<212> DNA

<213> artificial

<220>

<223> primer

<400> 10

ccccctcga gttagttggt tggagacgcc actttg

36

<210> 11

<211> 45

<212> DNA

<213> artificial

<220>

<223> primer

<400> 11

ccccctcg agttaagaag actttttgtt gtttgagac gccac

45